

The gall, about 4.5 mm. long, consists of the subglobular swollen base of the *Atriplex* leaf, the sides being folded upwards, leaving an open slit above, the margins of which are curled outward. The end of the leaf makes a pointed process at the end of each gall.

Las Cruces, N. Mex. (Townsend and Cockerell); Trinidad, Colo. (L. C. Bragg). Trinidad is the type locality.

Mr. Bragg also reports that he found *Kermes gillettei* at Trinidad.

#### PARASITE.

A very interesting parasite has been reared from this insect, which seems to possess characters common to the Encyrtinæ and Aphelininæ. The material is not in condition for description, but this statement is made in the hope that some future observer, finding *Atriplicia*, will try to rear a good series of the parasite.

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### THREE NEW TICKS FROM THE UNITED STATES.

BY NATHAN BANKS.

In describing *Dermacentor venustus* in my Revision of the Ixodoidea, or Ticks, of the United States,<sup>a</sup> I had a few specimens that would hardly fit and were left unnamed, or placed doubtfully with that species. Several males, in the collection of the Department of Agriculture, were from Prescott, Washington, taken from a horse in February, 1896. Since the publication of the Revision I have received several ticks from Dr. H. T. Ricketts, who is interested in the spotted fever, and among the material were two females and a male from a horse at Mountain Home, Idaho. These agree with the specimens from horse at Prescott and differ from *D. venustus* in several ways, so that I shall describe it as follows:

#### *Dermacentor modestus*, n. sp.

*Male.* Red-brown, marked with white lines and dots, but not so heavily as in *D. venustus* or *D. occidentalis*; the heaviest marking outlines the region of the shield of the female; legs slightly marked with white. Capitulum scarcely as broad as that of *D. venustus*, the hind angles hardly as much produced; dorsum hardly as much widened behind as that of *D. venustus*, punctulate as in the allied forms; hind coxæ about twice as wide as long on base, armed as usual.

Length, male, 3.5 mm.

<sup>a</sup> Technical Series, No. 15, Bureau of Entomology, U. S. Department of Agriculture, 1908.

*Female.* Capitulum and legs reddish brown; shield mostly white on sides and behind, leaving much of the middle area unmarked, abdomen dark brown. Capitulum broad, rather broader than in *D. venustus*, with smaller porose areas, distinctly separate, and less pear-shaped; shield of the general shape of *D. venustus*, a little more narrow, fully as long as broad, coarsely punctate on sides, much more minutely in middle and behind.

Length of female shield, 1.5 mm.

Specimens from Mountain Home, Idaho; Prescott, and Olympia, Washington.

Close to *D. venustus*, but in the male the stigmal plate (fig. 12, upper figure) has the projection pointing more backward, and in the female (fig. 12, lower figure) the projection is more obliquely upturned. Smaller than *D. venustus*, and with less white, especially noticeable in the male.

Another new tick adds a genus to our fauna; it is the following:

#### *Aponomma inornata*, n. sp.

Dark mahogany-brown, unmarked; legs paler reddish brown. Body about one and two-thirds as long as broad, as broad behind as in front, surface minutely striate and more coarsely wrinkled; three deep longi-



FIG. 12.—*Dermacentor modestus*: Stigmal plate of male above, of female below.

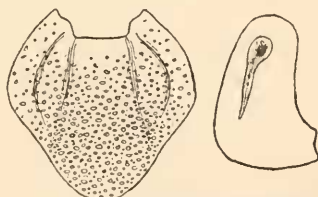


FIG. 13.—*Aponomma inornata*: Shield at left, stigmal plate at right.

tudinal furrows on posterior part of the dorsum, limited by a submarginal furrow; the festoons distinct. Shield (fig. 13) as broad as long, deeply emarginate in front, densely and deeply pitted, especially on the middle area, lateral carinæ distinct, curved; no trace of eye-like spot. Capitulum (fig. 14) subtriangular, the porose areas rather elongate, separated by a narrow space. Legs of moderate length; coxæ all small, coxa I with two subequal spines behind, others unarmed; tarsus I one and one-third longer than the preceding joint, in other

tarsi (see fig. 15) the basal part much shorter than the apical part, all tarsi tapering to the tip. Palpi slender, middle joint about twice as long as the apical joint. Stigmal plate (fig. 13) elongate, with a short, broad, dorsal prolongation, surface nearly smooth.

Length of female, 8 mm.; of shield, 1.5 mm.



FIG. 14.—*Aponomma inornata*: Capitulum.



FIG. 15.—*Aponomma inornata*: Tarsus IV.

Taken from a dog at Corpus Christi, Texas (Hooker); also from rabbit at Victoria, Texas (Mitchell).

The third species, described below, is an *Ixodes* related to *I. hexagonus*.

#### *Ixodes texanus*, n. sp.

Hard parts red-brown; shield rather yellowish in middle, legs paler reddish brown, rest of body lead-brown to black. Shield (fig. 16, at left) a little longer than broad, anterior sides rounded, posterior sides slightly concave, finely punctate, above the lateral parts

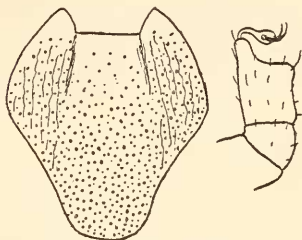


FIG. 16.—*Ixodes texanus*: Shield at left, tarsus IV at right.

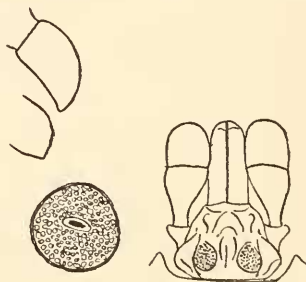


FIG. 17.—*Ixodes texanus*: Coxa I at left, above; stigmal plate at left, below; capitulum at right.

striate, no distinct lateral carinae. Capitulum (fig. 17, at right) trapezoidal, strongly wrinkled above; porose areas nearly circular, well separated. Palpi short and broad. Abdomen, in engorged female, much elongate and posteriorly swollen. Legs short, tarsus I one and one-fourth times as long as preceding joint; all tarsi end abruptly, the joint being slightly swollen above before tip; coxa I (fig. 17, at left,

above) with a very short process, hardly a spine. Stigmal plate (fig. 17, at left, below) subcircular, quite strongly sculptured.

Length 6.5 mm. (swollen female) ; shield, 1 mm.

From a raccoon in Live Oak County, Texas (Mitchell and Bishopp).

This species will run to *I. hexagonus* in my table of *Ixodes* in the Revision of Ixodoidea, but it differs at once from that species in the abruptly-ending tarsi, as well as in minor points, as shape of porose areas, etc.

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### A CATALOGUE OF AMERICAN AQUATIC AND SEMI-AQUATIC HEMIPTERA.

BY G. W. KIRKALDY, F.E.S., and J. R. DE LA TORRE BUENO.

As no catalogue of aquatic Hemiptera has been published for more than thirty years, the present list has been prepared for the use of our colleagues and ourselves. It was our intention at first to restrict it to the species of America north of Mexico, but the American regions and subregions are difficult to limit sharply, and so many northern workers visit the Antilles, Mexico, and even farther south, that we feel that a more comprehensive list will be at once scientific and convenient.

A large amount of material is in our hands for working up, and in due time we hope to replace this list by a critical synopsis of the American aquatic and semiaquatic Hemiptera.

In this list the references have been abridged so that they may be given complete for each genus and species. The genus under which each species has been described is given in parentheses following the name of the species. The numbers of the families, subfamilies, and genera are those in the senior author's List of Genera,<sup>a</sup> such as are omitted being those that do not occur in our fauna. This catalogue is intended to include everything published before July 1, 1908.

The following works at least should be in the possession of every worker in aquatic forms in the Heteroptera :

BERGROTH, DR. E., AND BUENO, J. R. DE LA TORRE.

On the aquatic and semi-aquatic Hemiptera collected by Prof. James S. Hine in Guatemala. (First paper.) < Ohio Nat., VIII, pp. 370-382, figs. 1-5.

<sup>a</sup> See bibliography, p. 174.